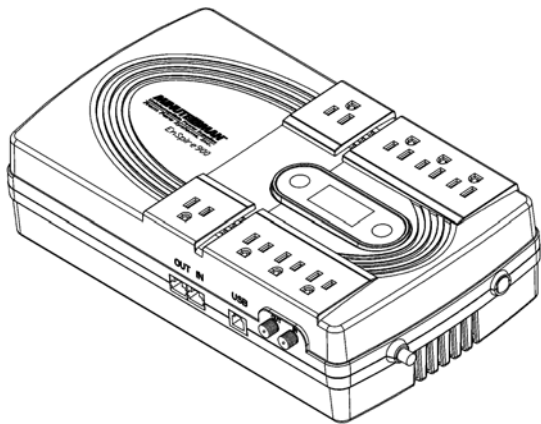


## Enspire Series UPS

(EN750 and EN900)

### User's Manual



## 1 INTRODUCTION

Thank you for purchasing this power protection product. It has been designed and manufactured to provide many years of trouble free service.

### IMPORTANT SAFETY INSTRUCTIONS SAVE THESE INSTRUCTIONS !

Please read this manual before installing your Enspire Series UPS, models EN750, EN900 as it provides important information that should be followed during installation and maintenance of the UPS and batteries allowing you to correctly set up your system for the maximum safety and performance. Included is information on customer support and factory service if it is required. If you experience a problem with the UPS please refer to the Troubleshooting guide in this manual to correct the problem or collect enough information so that the Technical Support Department can rapidly assist you.



**This symbol indicates "ATTENTION"**



**This symbol indicates "Risk of Electrical Shock"**



**This symbol indicates "Alternating Current Supply Phase"**



**This symbol indicates "Alternating Current Supply"**



**This symbol indicates "Direct Current Supply"**



**CAUTION!** Connect the UPS to a two pole, three wire grounding AC wall outlet. The receptacle must be connected to the appropriate branch protection (circuit breaker or fuse). Connection to any other type of receptacle may result in a shock hazard and violate local electrical codes. Do not use extension cords, adapter plugs, or surge strips.



**CAUTION!** To reduce the risk of fire, connect only to a circuit provided with 20 amperes maximum branch circuit over-current protection in accordance with the National Electric Code, ANSI/NFPA 70.



**CAUTION!** To reduce the risk of electrical shock with the installation of this UPS equipment and the connected equipment, the user must ensure that the combined sum of the AC leakage current does not exceed 3.5mA.



**CAUTION!** To reduce the risk of electrical shock in conditions where the load equipment grounding cannot be verified, disconnect the UPS from the AC wall outlet before installing a computer interface cable. Reconnect the power cord only after all signaling connections are made.



**WARNING:** This Uninterruptible Power Supply contains potentially hazardous voltages. Do not attempt to disassemble the UPS beyond the battery replacement procedure. This UPS contains no user serviceable parts. Repairs and Battery replacement must be performed by **QUALIFIED SERVICE PERSONNEL ONLY**.



**WARNING:** Risk of Electrical Shock. Hazardous live parts inside these power supplies are energized from the battery even when the AC input is disconnected.



**CAUTION!** To de-energize the outputs of the UPS:  
1. If the UPS is on press and release the On/Off Button.  
2. Disconnect the UPS from the AC wall outlet.  
3. To de-energize the UPS completely, disconnect the battery.



**CAUTION!** This UPS series is intended to be install in a temperature controlled environment that is free of conductive contaminants.



**CAUTION!** The Maximum ambient operating temperature for this UPS series is 40°C ("0 ~ 40°C" for Ambient Operation).



**CAUTION!** The screen of the coaxial cable is intended to be connected to earth in the building installation.



**NOTICE!** The output of this device is not sinusoidal. It has a total harmonic distortion and maximum single harmonic as below:  
EN750 Total harmonic 68.9% Single harmonic 58.9%  
EN900 Total harmonic 56.7% Single harmonic 48.9%



**On / Off Button:** Press and hold the On/Off Button for one beep then release, to turn the UPS on and supply power to the load. The load is immediately powered while the UPS runs a five second self test. Press the On/Off Button for at least one second then release, to turn the UPS off. The UPS will continue to charge the batteries whenever it is plugged into a wall outlet and there is an acceptable AC voltage present.

**NOTICE:** This equipment has been tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules and the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference of the Canadian Department of Communications. These limits are designed to provide reasonable protection against such interference in a residential installation. This equipment generates and uses radio frequency and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, this equipment may cause interference to radio and television reception. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the computer with respect to the receiver.
- Move the computer away from the receiver.
- Plug the computer into a different outlet so that the computer and receiver are on different branch circuits.
- Shielded communications interface cables must be used with this product.



**WARNING:** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

#### RECEIVING INSPECTION

After removing your UPS from its carton, it should be inspected for damage that may have occurred in shipping. Immediately notify the carrier and place of purchase if any damage is found. Warranty claims for damage caused by the carrier will not be honored. The packing materials that your UPS was shipped in are carefully designed to minimize any shipping damage. In the unlikely case that the UPS needs to be returned to the manufacturer, please use the original packing material. Since the manufacturer is not responsible for shipping damage incurred when the system is returned, the original packing material is inexpensive insurance.

**PLEASE SAVE THE PACKING MATERIALS!**

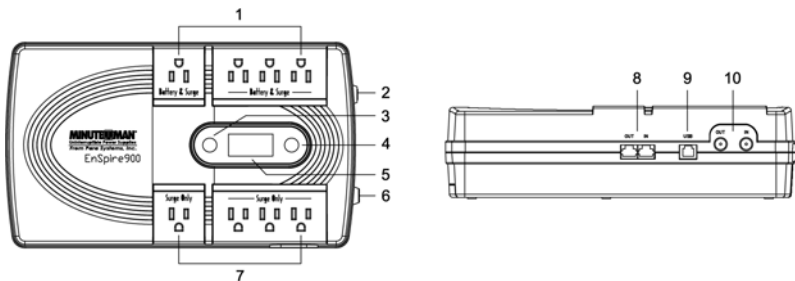
**NOTE:** These UPSs are shipped with the batteries disconnected. The batteries must be connected before putting these UPSs into service. Refer to Section 3 "Installation" for connecting the batteries.

#### LIFE SUPPORT POLICY

As a general policy, we do not recommend the use of any of our products in life support applications where failure or malfunction of the product can be reasonably expected to cause failure of the life support device or to significantly affect its safety or effectiveness. We do not recommend the use of any of our products in direct patient care. We will not knowingly sell our products for use in such applications unless it receives in writing assurances satisfactory to us that (a) the risks of injury or damage have been minimized, (b) the customer assumes all such risks, and (c) our liability is adequately protected under the circumstances.



## 2 CONTROLS AND INDICATORS

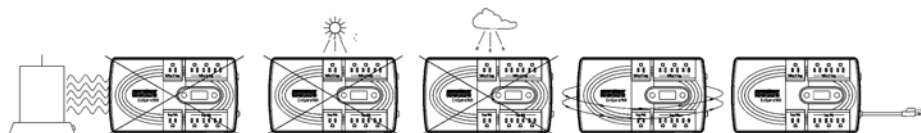


1. Battery Backup and Surge output power receptacles: for mission critical equipment.
2. Input circuit breaker: for overload protection. If the output load exceeds the UPS's power rating the breaker will trip.
3. Scroll button: to scroll through the LCD display and to silence the alarm in the Battery mode. When the UPS is in the Battery mode hold the Scroll button down until the Alarm Silencer icon appears on the LCD and then release.
4. On/Off Button: to turn the UPS On/Off.
5. The LCD Display has visual (icons) and numerical information. The icons are AC mode, On Battery mode, Alarm Silence (Battery Mode only), Fault, and a dual-function bar graph for Load capacity (AC mode) and Battery capacity (DC mode). The numerical information is Input/Output voltage and frequency, and the estimated battery runtime.
6. Input Power Cord: to connect to utility power.
7. Surge Only output power receptacles: for non-mission critical equipment.
8. RJ-11/45 modular connectors: for single line phone/fax/modem protection.
9. USB port: for USB communications to monitor and control the UPS. The USB Protocol is HID. The USB port operates with the standard Windows USB drivers and does not require any additional USB drivers.
10. Coaxial connectors: for transient voltage surge suppression for cable modem, CATV converter or DSS receiver.

Model #	Input Power Plug	Output Power Receptacles
EN750	NEMA 5-15P W/6 ft cord	4-NEMA 5-15R Surge Only
EN900		4-NEMA 5-15R Battery Backup & Surge



## 3 INSTALLATION



This UPS series is intended to be install in a temperature controlled environment that is free of conductive contaminants. Select a location which will provide good air circulation for the UPS at all times. Avoid locations near heating devices, water or excessive humidity, or where the UPS is exposed to direct sunlight. Route power cords so they cannot be walked on or damaged.

ENVIRONMENTAL	
Operating Temperature:	0 to 40 degrees C (+32 to +104 degrees F) at 0 to 1,000m (0 to +3,333 ft)
Operating Elevation:	
Operating Temperature:	0 to 35 degrees C (+32 to +95 degrees F) at 1001 to 3,000m (+3,334 to +10,000 ft)
Operating Elevation:	
Storage Temperature:	-15 to +45°C (+5 to +113°F)
Operating/Storage Humidity:	95% Non-Condensing
Storage Elevation:	0 to 15,000m (0 to +50,000 ft)
Audible Noise at 1 m (3 ft.):	<45 dBA

#### INSTALLATION

Be sure to read the installation placement and all the cautions before installing the UPS. Place the UPS in the final desired location and complete the rest of the installation procedure. These UPSs are shipped with the internal batteries disconnected. The batteries must be connected before putting these UPSs into service. See the Connecting The Batteries procedure to connect the batteries.

#### CONNECTING THE BATTERIES

(QUALIFIED SERVICE PERSONNEL ONLY)

Please read all of the **WARNINGS** and **CAUTIONS** before attempting to connect the batteries.

1. Remove the UPS from the shipping box and set on the floor or a bench top.
2. Place the UPS receptacle side down.
3. Remove the battery compartment door retaining screw. (FIG. 1)
4. Remove the battery compartment door by pressing down on the locking tabs, slide the door outwards and then lift up. (FIG. 2)
5. Verify proper polarity. Connect the battery negative (Black) wire to the battery negative terminal. (FIG. 3)  
**NOTE:** Some sparking might occur, this is normal.
6. Re-install the battery compartment door onto the UPS.  
**WARNING:** DO NOT pinch the battery wires with battery compartment door.
7. Re-install the battery compartment door retaining screw.
8. Continue with the rest of the Installation.

FIG. 1

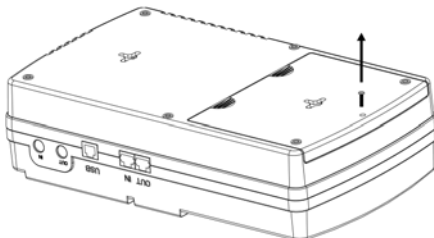


FIG. 2

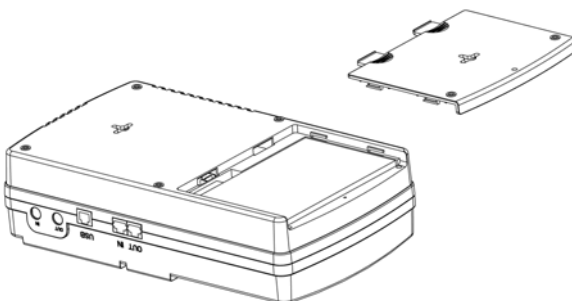
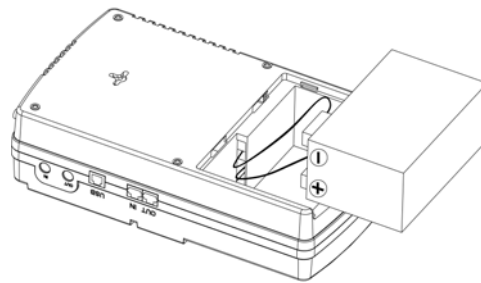


FIG. 3



#### WALL MOUNTING

The wallmount configuration allows the user to mount the UPS on the wall. The UPS's back panel has keyed mounting holes for attaching the UPS to the wall.

**NOTE:** The internal battery must be connected before mounting the UPS to the wall.

1. Once the location and position of the UPS has been determined, use the template to mark the screw hole position on the wall. Use 1/8" drill bit. **CAUTION,** you should always wear protective gear for your hands and eyes when operating power tools.
2. Attach the two retaining screws (provided) to the wall and make sure that the retaining screws are screwed into structural material. Then clean the area of any loose material. Do not tighten the retaining screws all the way in, leave approximately 3/16" of the retaining screws sticking out.
3. Position the UPS, so that the keyed mounting holes line up with the two retaining screws. Slide the UPS down until it is resting securely on the retaining screws.
4. The Wallmount Configuration is complete. See Connecting your Equipment.

#### CONNECTING YOUR EQUIPMENT

Plug the critical equipment into the Battery Backup & Surge output receptacles on the UPS. Plug the noncritical equipment into the Surge Only output receptacles on the UPS. Do not use extension cords, adapter plugs or surge strips on the output of the UPS. Ensure that you do not exceed the maximum output rating of the UPS (refer to the information label or the electrical specifications in this manual).



**CAUTION! DO NOT** connect a laser printer to the output receptacles on the UPS.

#### CONNECTING THE UPS TO AN AC SOURCE

**CAUTION** - To reduce the risk of fire, connect only to a circuit provided with 20 amperes maximum branch circuit over-current protection in accordance with the National Electric Code, ANSI/NFPA 70. Plug the UPS into a two pole, three wire, grounded receptacle only. Do not use extension cords, adapter plugs, or surge strips.

#### CHARGING THE BATTERY

The UPS will charge the internal battery whenever the UPS is connected to an AC source and there is an acceptable AC voltage present (100 - 140VAC). It is recommended that the UPS's battery be charged for a minimum of 4 hours before use. The UPS may be used immediately, however, the "On Battery" runtime maybe less than normally expected. **NOTE:** If the UPS is going to be out of service or stored for a prolonged period of time, the battery must be recharged for at least twenty-four hours every ninety days.

#### GREEN MODE

The Green mode indicator provides the user with a visual notification that the UPS is operating at its optimum efficiency level (>90%) in the normal AC mode.

#### PHONE/FAX/MODEM PROTECTION CONNECTION (OPTIONAL)

Connect a single line phone, fax or modem line to the RJ-11/45 modular connectors on the side of the UPS. This connection will require another length of telephone cable (provided). The cable coming from the telephone service is connected to the port marked "IN". The equipment to be protected is connected to the port marked "OUT". **NOTE:** Connecting to the phone/fax/modem modular connectors is optional. The UPS works properly without this connection.

#### USB COMMUNICATIONS PORT (OPTIONAL)

The Power Monitoring Software can be used with the UPS. Use only the interface cable that comes with the UPS. Connect one end of the USB cable to the USB port on the UPS. Connect the other end of the USB cable to the device that will be monitoring/controlling the UPS. The USB Protocol is HID. The USB port operates with the standard Windows USB drivers and does not require any additional USB drivers. **NOTE:** Connecting to the USB port is optional. The UPS works properly without this connection.

#### COAXIAL PROTECTION CONNECTION (OPTIONAL)

Connect a cable modem, CATV converter or DSS receiver to the coax connectors on the side of the UPS. This connection will require another coax cable (provided). The cable coming from the coax service is connected to the port marked "IN". The equipment to be protected is connected to the port marked "OUT". **NOTE:** Connecting to the coaxial connectors is optional. The UPS works properly without this connection.



## 4 OPERATION

#### SYSTEM OVERVIEW

This UPS protects computers, internetworking, security, and telecommunications equipment from blackouts, brownouts, overvoltages, and surges. During normal AC operation, the UPS will quietly and confidently protect your system from power anomalies.

The UPS will charge the batteries with the UPS in the on or off position when the UPS is plugged into the wall outlet and there is an acceptable AC voltage present (100 - 140VAC). When a blackout, brownout, or an overvoltage condition occurs; the UPS will transfer to the battery mode, the On Battery indicator will illuminate and the audible alarm will sound once every five seconds indicating that the commercial power is lost or unacceptable. When the commercial power returns or is at an acceptable level, the UPS will automatically transfer back to the AC normal mode and start recharging the batteries. During an extended outage when there is approximately two minutes of backup time remaining the audible alarm will sound twice every five seconds. This Low Battery Warning is letting the user know that they should save all open files and turn off their computer. When the batteries reach the predetermined level the UPS will automatically shutdown protecting the batteries from over discharging. Once the utility power returns the UPS will automatically restart, providing safe usable power to the connected equipment and start recharging the batteries.

#### ON/OFF BUTTON

Press and hold the On/Off Button for one beep then release, to turn the UPS on and supply power to the load. The load is immediately powered while the UPS runs a five second self test. Press the On/Off Button for at least one second then release, to turn the UPS off. The UPS will continue to charge the batteries whenever it is plugged into a wall outlet and there is an acceptable AC voltage present.

#### SCROLL BUTTON

Press the scroll button to scroll through the UPS's parameters (Input/Output voltage and frequency, and the estimated battery runtime) that are displayed on the LCD.

To silence the audible alarm (Battery mode only) when the UPS is in the Battery mode hold the scroll button down for 2-seconds and then release, the Alarm Silencer icon will illuminate. Once the audible alarm was been silenced the alarm will automatically turn back on when one of the following events occur: Low Battery Warning, Overload, or a Fault condition. To turn the audible alarm back on manually hold the scroll button down for 2-seconds and then release, the Alarm Silencer icon will turn off and the audible alarm will sound. Once the UPS returns to the normal AC mode the audible alarm will reset to default.

#### USB COMMUNICATIONS PORT

The USB Protocol is HID. The USB port operates with the standard Windows USB drivers and does not require any additional USB drivers. Simply plug the USB cable into the UPS and the computer then follow the prompts on the screen.

#### POWER MONITORING SOFTWARE

The UPS comes with power monitoring software. See the software CD for the installation of the power monitoring software.

#### ALARMS

##### ON BATTERY

When the UPS is operating on the batteries, the On Battery icon will illuminate and the audible alarm will sound once every five seconds. The alarm will stop once the UPS returns to the AC normal mode.

##### LOW BATTERY WARNING

The UPS will sound two beeps every five seconds when the battery reserve runs low. This condition will continue until AC returns or the UPS shuts down from battery exhaustion.

##### WEAK/BAD BATTERY

The UPS automatically tests the battery's condition. If the battery is weak, bad or disconnected, the Battery capacity bar graph will flash off and on and the alarm will beep three times every thirty seconds until the battery is reconnected or replaced. It is recommended that the UPS be allowed to charge overnight before performing a battery test to confirm a Weak/Bad Battery condition. This alarm will be repeated until the batteries pass a self test.

##### OVERLOAD

When the amount of load attached to the UPS exceeds its power rating, the Load capacity bar graph will flash off and on and the alarm will sound 1 beep every half second. This alarm will remain on until the excess load is removed or the UPS's self protection circuit shuts the UPS down.

##### UPS FAULT

When the UPS detects a hardware fault, the Fault icon will illuminate, the alarm will sound continuously and the output will turn off. The fault condition, in some instances, may be reset by turning the UPS off and then on again.

5 TROUBLESHOOTING

Symptom	Possible Cause	What To Do
UPS will not turn on	On/Off/ button not pressed	Press and release the On/Off button to start UPS
UPS operates in battery mode only, even though there is normal AC present	Input AC circuit breaker is tripped	Reset circuit breaker by pressing the plunger back in. If the AC circuit breaker trips after UPS starts up, reduce the load on the UPS
Fault icon is illuminated	UPS has detected an internal fault	Call for service
The AC mode icon is illuminated, but there is no output	The UPS is being controlled via its communications port	Disconnect the computer cable from the UPS and press the On button. If UPS works normally, the software has control of the UPS
UPS does not provide expected runtime	The batteries may be weak or at the end of useful service life	Charge the batteries for 8-hours and retest. If the runtime is still less than expected, the batteries may need to be replaced, even though the Weak/Bad Battery alarm is not sounding
The Battery Capacity bar graph is flashing	Loose connections at the batteries, Weak batteries, Bad batteries	Check battery connections, charge the batteries for 8-hours, replace the batteries
The Load Capacity bar graph is flashing	The load has exceeded the UPS's capacity	Check the specifications (see section 8). Remove part of the load

6 REPLACING THE BATTERY

REPLACING THE BATTERY  
(QUALIFIED SERVICE PERSONNEL ONLY)

Please read all of the **WARNINGS** and **CAUTIONS** before attempting to service the batteries.

**WARNING!** This UPS contains potentially hazardous voltages. Do not attempt to disassemble the UPS beyond the battery replacement procedure. This UPS contains no user serviceable parts. Repairs and battery replacement must be performed by **QUALIFIED SERVICE PERSONNEL ONLY**.

**CAUTION:** Do not open or mutilate batteries. Released electrolyte is harmful to the skin and eyes and may be toxic.

**CAUTION:** Do not dispose of batteries in a fire. The batteries may explode. The batteries in this UPS are recyclable. Dispose of the batteries properly. The batteries contain lead and pose a hazard to the environment and human health if not disposed of properly. Refer to local codes for proper disposal requirements or return the battery to the supplier.

**CAUTION:** Although the battery system voltage is only 12VDC the battery system can still present a risk of electrical shock. These batteries produce sufficient current to burn wire or tools very rapidly, producing molten metal. Observe these precautions when replacing the batteries:

1. Remove watches, rings, or other metal objects.
2. Use hand tools with insulated handles.
3. Wear protective eye gear (goggles), rubber gloves and boots.
4. Do not lay tools or other metal parts on top of batteries.
5. Disconnect the charging source prior to connecting or disconnecting the battery terminals.
6. Determine if the battery is inadvertently grounded. If the battery is, remove the source of the grounding. Contact with any part of a grounded battery can result in an electrical shock. The likelihood of such shock will be reduced, if such grounds are removed during installation and maintenance.

**CAUTION:** Replace batteries with the same number and type as originally installed in the UPS. These batteries have pressure operated vents. These UPSs contain sealed non-spillable maintenance-free lead acid batteries.

Model #	EN750	EN900
Battery Qty/Rating	1-12V7.0Ah	1-12V9.0Ah
CSB Part #	GP1272	HR1234W
Yuasa Part #	NP-7.2-12	REW45-12
First Power Part #	FP1270	FP1290
Ritar Part #	RT1270	RT1290
Center Power Part #	CP1270	CP1290
Long Way Part #	6FM7	6FM9A

Typical Recharge Time: 8-hours from total discharge.  
Typical Battery Life: 2-5 years, depending on discharge cycles and ambient temperature.

BATTERY REPLACEMENT PROCEDURE

PLEASE READ THE CAUTIONS AND WARNINGS BEFORE ATTEMPTING TO REPLACE THE BATTERIES

1. Turn off the equipment that is plugged into the output receptacles of the UPS.
2. Press the On/Off Button for at least one second then release the On/Off Button to turn the UPS off.
3. Unplug the UPS's power cord from the AC wall outlet.
4. Unplug the equipment from the output receptacles of the UPS.
5. Unplug the computer interface cable from the UPS.
6. Turn the UPS over and lay it face down.
7. Remove the battery compartment door retaining screw. (FIG. 1)
8. Remove the battery compartment door by pressing down on the locking tabs, slide the door outwards and then lift up. (FIG. 2)
9. Grasp the battery and gently pull it out far enough to disconnect the battery wires.
10. Disconnect the battery negative (Black) wire. (FIG. 3)
11. Disconnect the battery positive (Red) wire. (FIG. 3)
- NOTE:** DO NOT short the battery wires together.
12. Remove the battery and set aside.
- NOTE:** Orient the new battery in the same direction as the original battery.
13. Place the new battery close enough to connect the battery wires.
14. Connect the battery positive (Red) wire to the battery positive terminal.
15. Connect the battery negative (Black) wire to the battery negative terminal.
- NOTE:** Some sparking might occur, this is normal.
16. Install the new battery into the UPS.
17. Re-install the battery compartment door onto the UPS.
- WARNING:** DO NOT pinch the battery wires with battery compartment door.
18. Re-install the battery compartment door retaining screw.
19. Properly dispose of the old batteries at an appropriate recycling facility or return them to the supplier in the packing material for the new batteries.
20. The UPS is now ready for normal operation.

FIG. 1

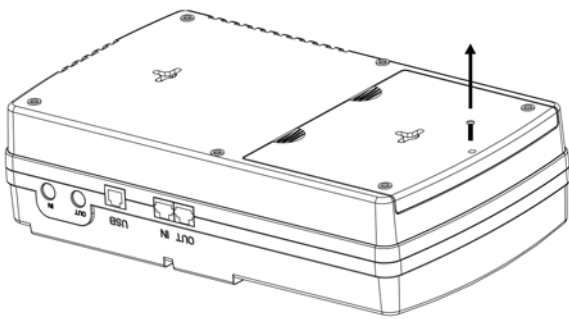


FIG. 2

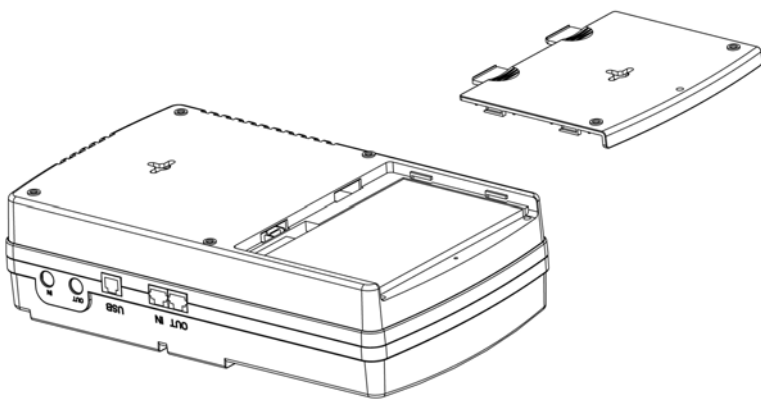
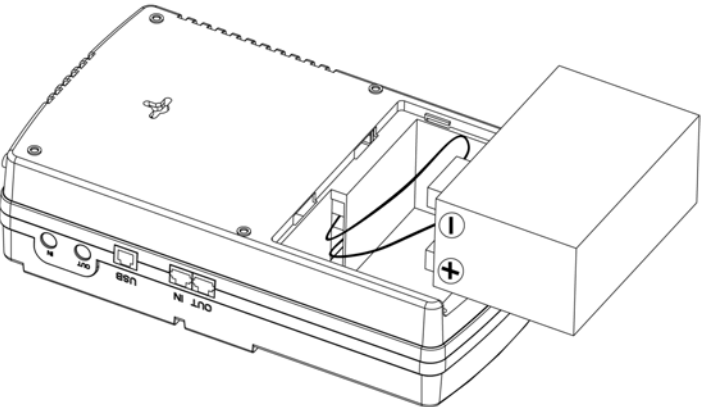


FIG. 3



7 OBTAINING SERVICE

IF THE UPS REQUIRES SERVICE

1. Use the **TROUBLESHOOTING** section to eliminate obvious causes.
2. Verify there are no circuit breakers tripped. A tripped circuit breaker is the most common problem.
3. Call your dealer for assistance. If you cannot reach your dealer, or if they cannot resolve the problem call or fax the Technical Support department at the following numbers; Voice phone (972) 446-7363, FAX line (972) 446-9011 or visit our Web site at [www.minutemanups.com](http://www.minutemanups.com) the "Discussion Board". Please have the following information available BEFORE calling the Technical Support Department.
  - A. Your name and address.
  - B. Where and when the unit was purchased.
  - C. All of the model information about your UPS.
  - D. Any information on the failure, including LEDs that may be illuminated.
  - E. A description of the protected equipment, including model numbers if possible.
  - F. A technician will ask you for the above information and, if possible, help solve your problem over the phone. In the event that the unit requires factory service the technician will issue you a Return Material Authorization Number (RMA #).
  - G. If the UPS is under warranty, the repairs will be done at no charge. If not, there will be a charge for repair.
4. Pack the UPS in its original packaging. If the original packaging is no longer available, ask the Technical Support Technician about obtaining a new set. It is important to pack the UPS properly in order to avoid damage in transit. Never use Styrofoam beads for a packing material.
  - A. Include a letter with your name, address, day time phone number, RMA number, a copy of your original sales receipt, and a brief description of the problem.
5. Mark the RMA # on the outside of all packages. The factory cannot accept any package without the RMA # marked on the outside.
6. Return the UPS by insured, prepaid carrier to:

Para Systems Inc.  
MINUTEMAN UPS  
1455 LeMay Drive  
Carrollton, TX 75007  
ATTN: RMA # \_\_\_\_\_

8 SPECIFICATIONS

SYSTEM SPECIFICATIONS		
Model Number	EN750	EN900
Maximum Power Capacity	750VA / 400W	900VA / 500W
INPUT		
Number of Phase	Single (1Ø 2W +G)	
Nominal Voltage	120VAC	
Acceptable Input voltage	0 - 160VAC	
Voltage Range	100 - 140VAC	
Frequency Limits	50 or 60 Hz, +/-5Hz, autosensing	
Low Voltage Transfer Point	96V(+/-3%) resets to Utility Power at 101V(+/-3%) or higher	
High Voltage Transfer Point	146V(+/-3%) resets to Utility Power at 140V(+/-3%) or lower	
Surge Energy Rating	320 J	
Input Protection	Resettable Circuit Breaker	
OUTPUT NON-BATTERY OPERATION		
Voltage Range	120VAC: 100 - 140VAC	
Frequency Range	60Hz: 55 - 65Hz or 50Hz: 45 - 55Hz	
Efficiency (Normal Mode)	>90% (Full Load)	
OUTPUT BATTERY OPERATION		
Waveform Type	Simulated Sine Wave	
Nominal Voltage	120VAC	
Voltage Regulation	120VAC +2% / -9% (until Low Battery Warning)	
Frequency	50/60Hz, +/-0.5Hz (unless synchronized to utility)	
Transfer Time	6-8 ms Typical	
Overload Capacity	110% for 10-seconds, 120% Shutdown Immediately	
Protection	Over-Current, Short-Circuit Protected and Latching Shutdown	
Runtime: Half Load (minutes)	10	
Runtime: Full Load (minutes)	2	
PHYSICAL		
Size - Net L X W X H	12.4 x 7.2 x 3.3" (314 x 183 x 83 mm)	
Weight - Net	9.4 lbs (4.3 Kgs)	9.7 lbs (4.4 Kgs)
Size - Shipping L X W X H	14.4 x 10.2 x 5.6" (367 x 260 x 143 mm)	
Weight - Shipping	10.6 lbs (4.8 Kgs)	11.0 lbs (5.0 Kgs)
REGULATORY COMPLIANCE		
Safety Approvals, EMC	cTUVUS (conforms to UL1778, CSA 22.2 standards), FCC Class B	

9 LIMITED PRODUCT WARRANTY

Para Systems, Inc. (Para Systems) warrants this equipment, when properly applied and operated within specified conditions, against faulty materials (excluding the batteries) or workmanship for a period of three years from the date of purchase. Para Systems Inc. (Para Systems) warrants the batteries for a period of two years from the date of purchase. For equipment sites within the United States and Canada, this warranty covers repair or replacement of defective equipment at the discretion of Para Systems. Repair will be from the nearest authorized service center. Replacement parts and warranty labor will be borne by Para Systems. For equipment located outside of the United States and Canada, Para Systems only covers faulty parts. Para Systems products repaired or replaced pursuant to this warranty shall be warranted for the unexpired portion of the warranty applying to the original product. This warranty applies only to the original purchaser who must have properly registered the product within 10 days of purchase.

The warranty shall be void if (a) the equipment is damaged by the customer, is improperly used, is subjected to an adverse operating environment, or is operated outside the limits of its electrical specifications; (b) the equipment is repaired or modified by anyone other than Para Systems or Para Systems approved personnel; or (c) has been used in a manner contrary to the product's User's Manual or other written instructions.

Any technical advice furnished before or after delivery in regard to use or application of Para Systems's equipment is furnished without charge and on the basis that it represents Para Systems's best judgment under the circumstances, but it is used at the recipient's sole risk.

EXCEPT AS PROVIDED HEREIN, PARA SYSTEMS MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Some states do not permit limitation of implied warranties; therefore, the aforesaid limitation(s) may not apply to the purchaser.

EXCEPT AS PROVIDED ABOVE, IN NO EVENT WILL PARA SYSTEMS BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF THIS PRODUCT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. Specifically, Para Systems is not liable for any costs, such as lost profits or revenue, loss of equipment, loss of use of equipment, loss of software, loss of data, cost of substitutes, claims by third parties, or otherwise. The sole and exclusive remedy for breach of any warranty, expressed or implied, concerning Para Systems's products and the only obligation of Para Systems hereunder, shall be the repair or replacement of defective equipment, components, or parts; or, at Para Systems's option, refund of the purchase price or substitution with an equivalent replacement product. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

A1. DECLARATION OF CONFORMITY

Application of Council Directive(s): cTUVus (conforms to UL1778 standards)

Standard(s) to which Conformity is declared: FCC Class B

Manufacturer's Name: Para Systems, Inc. (MINUTEMAN UPS)

Manufacturer's Address: 1455 LeMay Drive Carrollton, Texas 75007 USA

Type of Equipment: Uninterruptible Power Supplies (UPS)  
Model No: EN750, EN900

Year of Manufacture: Beginning May 1, 2009

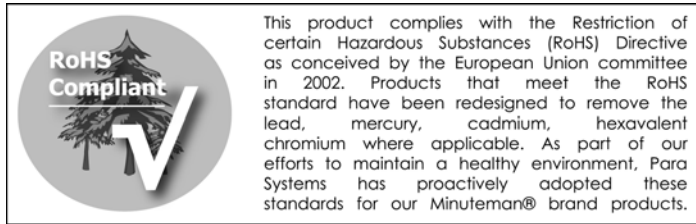
I, hereby declare that the equipment specified above conforms to the above Directive(s).

Robert Calhoun  
(Name)

Manager Engineering  
(Position)

Place: Carrollton, Texas, USA

Date: May 1, 2009



This product complies with the Restriction of certain Hazardous Substances (RoHS) Directive as conceived by the European Union committee in 2002. Products that meet the RoHS standard have been redesigned to remove the lead, mercury, cadmium, hexavalent chromium where applicable. As part of our efforts to maintain a healthy environment, Para Systems has proactively adopted these standards for our Minuteman® brand products.

**Para Systems, Inc.**  
**1455 LeMay Dr.**  
**Carrollton, TX 75007**  
**Phone: 1-972-446-7363**  
**Fax: 1-972-446-9011**  
**Internet: [minutemanups.com](http://minutemanups.com)**  
**UPS Sizing: [sizemyups.com](http://sizemyups.com)**